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SCIENTIFIC AND TECHNICAL INFORMATION

CAMERON STATION, ALEXANDRIA, VIRGINIA

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Dimensions of Stimulus
Situations Which Account
for Behavior Variance

Quarterly Status Report
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Group Psychology Branch
Office of Naval Research

Institute of Behavioral Research
Texas Christian University
Fort Worth 29, Texas

1. <u>Purpose</u>. The broad goals of this study involve an investigation of stimulus situations encompasing the social and physical aspects of the environment which might account for that portion of behavior variance which cannot presently be predicted from aptitude and personality tests. Two studies are currently in progress to explore taxonomic methodology and to demonstrate the relation of environmental factors related to two dependent variables, the academic performance and career choice of college students. It is hoped that similar investigation along these lines will eventually lead to the development of a measurable taxonomy of environmental variables accounting for a substantial portion of variance in individual and group behavior.

2. <u>Work Accomplished</u>.

(a) <u>Dimensions of Stimulus Situations Relevant to Academic Achievement and Career Choice of College Students</u>. Information pertaining to social and physical environmental conditions has been collected on a sample of 236 TCU students. The data have been coded and a correlation matrix comprising 186 variables has been

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computed. This matrix includes situational variables as well as
aptitutde, personality, and interest measures. The correlations
among variables have been reviewed carefully, and the matrix pre-
pared for cluster analysis and factor analysis, based on cluster
scores computed for individuals. Multiple correlation and mul-
tiple regression techniques and multiple discriminant analysis will
be utilized to predict the criteria mentioned above.

(b) Dimensions of organizations. The second current study
involves an investigation of campus organizations. The Hemphill
Group Dimensions Description Questionnaire and a specially designed
form surveying the status, participation in group activities, and group
identification of individual members, have been administered to a
number of TCU campus organizations. Information on 922 individuals
belonging to 59 groups has been gathered and the questionnaires are
presently being scored. The sample consists of 8 religion groups,
8 honorary societies, 8 departmental clubs, 13 military groups,
10 committees of the student government, 2 athletic teams and
8 fraternities. Upon completion of the scoring and coding procedures,
differences in the structure of different types of campus organizations,
and differences in the group dimension profiles obtained from high
status and low status members will be analyzed. It is hypothesized

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that groups falling under the same classification, e.g., religious groups, will tend to have similar organizational profiles as compared to groups listed in other categories, e.g. departmental clubs. Ward's hierarchical grouping method will be utilized to cluster the group profiles obtained through the Hemphill Group Dimensions Description Questionnaire. Concerning the differences in the perceptions of high and low status members; it is postulated that high status members will show more agreement in their description of the group than low status members whose descriptions as regards the group will be more variable.

In relation to the first phase of this study, group variables predictive of individual behavior will be isolated and added to the multiple regression equation predicting the criteria mentioned in (a). It is also planned to estimate group dimensions from information available on the members of the groups: family income, grade point average, personality dimensions, religion. These will be compared with comparable dimensions obtained through the Hemphill Questionnaire.

(c) A survey of the literature related to human ecology and the environmental determinants of behavior has been undertaken, in view of the massive literature relevant to this general problem.

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3. Publications and Reports.

    (a) Sells, S. B., editor Stimulus Determinants of Behavior.
        New York, The Ronald Press Company, 1963. This
        book presents the principal papers of the symposium
        conducted as the first phase of this project, in 1961.

    (b) Sells, S. B. Toward a Taxonomy of Organizations. The
        final manuscript of this paper, presented at the Carnegie
        Tech symposium in June, 1962, has been sent to
        Dr. Maynard Shelly for inclusion in a book on Organiza-
        tions, to be published by John Wiley and Sons, Inc.

    (c) Sells, S. B. The significance of the term environment in
        the behavioral equation. Colloquium talk to the
        Department of Psychology, University of Illinois,
        8 March, 1963.

    (d) Sells, S. B. An interactionist looks at the environment.
        Presidential Address to the Southwestern Psychological
        Association. 5 April, 1963.

4. Personnel.

Project Supervisor	Nurhan Findikyan
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